Gear Cutting Machines

	Mob Year	Year 1	Year 2	Year 3
Requirements	1,711	2,063	1,544	994
Domestic Capacity	1,526	1,808	2,320	3,034
Domestic Inventory	88			
Importers Inventory	132			
BIPEC	421			
Total	2,167			
Domestic/Shortfall/ Surplus	+ 456	- 255	+ 776	+2,040

Domestic Shortfall: None. Domestic capacity and inventories are capable of meeting mobilization and wartime requirements. No imports are required.

Foreign Availability: These machines are available from virtually every major producing country and can be delivered to the U.S. in nine months.

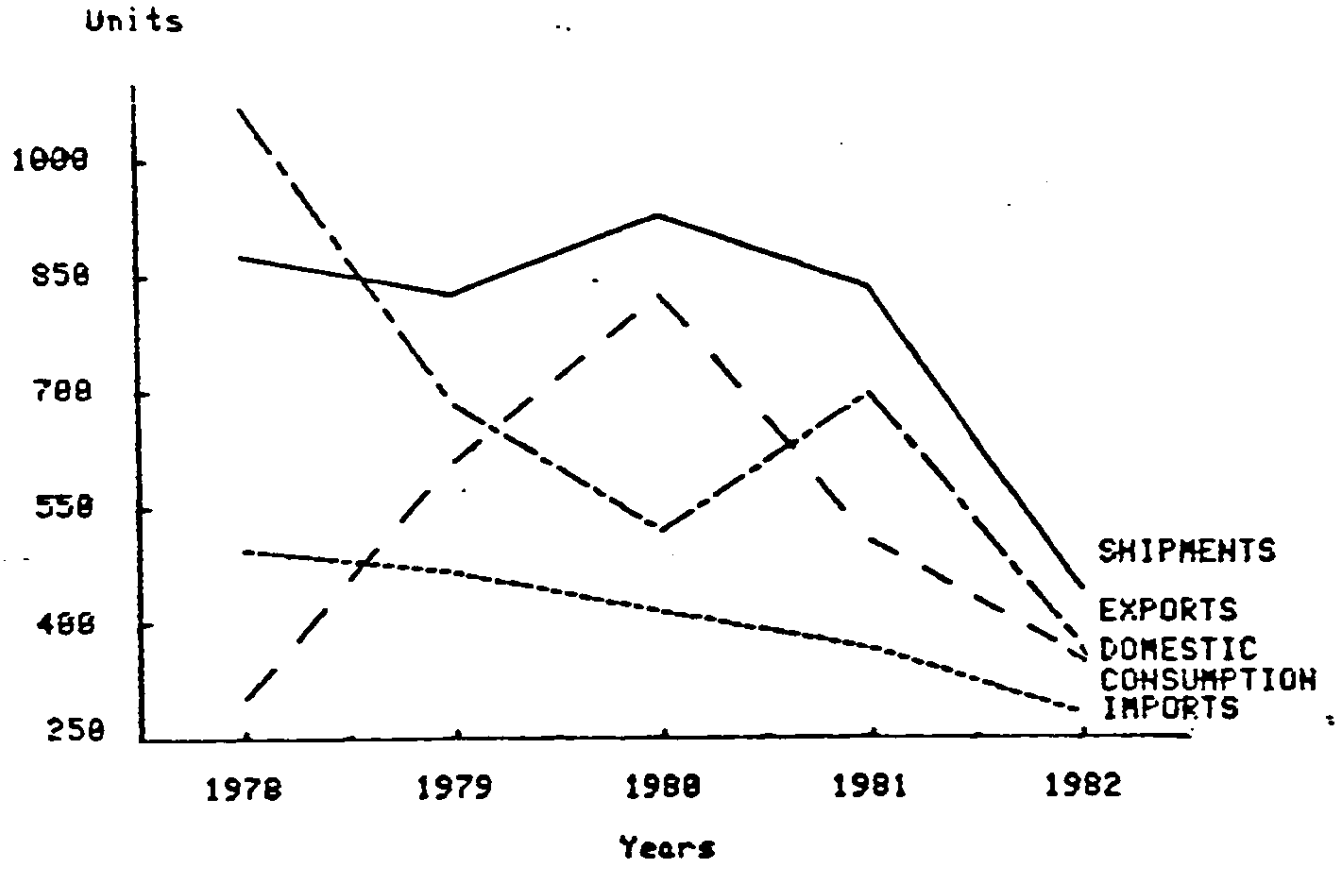
Fungibility: None.

Import Penetration: Imports as a percentage of domestic consumption rose from 50.2% in 1980 to 79% in 1982. However, in absolute terms, imports have declined from 415 machines in 1980 to 281 machines in 1982. During the first six months of 1983, the U.S. imported 94 machines, compared to 152 machines during the first six months of 1982.

Mobilization Capacity: Increased during 1978-82 period.

Conclusion: Negative finding.

GEAR CUTTING OR HOBBING MACHINE TOOLS



Source: U.S. Department of Commerce, Bureau of the Census.

Grinding and Polishing Machines

	Mob Year	Year 1	Year 2	Year 3
Requirements	54,201	52,014	34,941	19,559
Domestic Capacity	28,066	33,258	42,660	55,795
Domestic Inventory	2,177			
Importers Inventory	3,140			
DIPEC	2,162			
- Total	35,545			
Domestic/Shortfall/ Surplus	-18,656	-18,756	+7,719	+36,236

Domestic Shortfall: The U.S. would have a shortfall of machines during the mobilization and in the first year of the war. Subsequently, mobilization capacity would meet and exceed requirements.

Foreign Availability: Grinding machines are available from all the major free world producers except Canada and can be delivered in nine months or less. However, given the magnitude of the shortfall, U.S. Commerce Department trade and industry experts do not believe that adequate foreign supplies would be available to fill the gap.

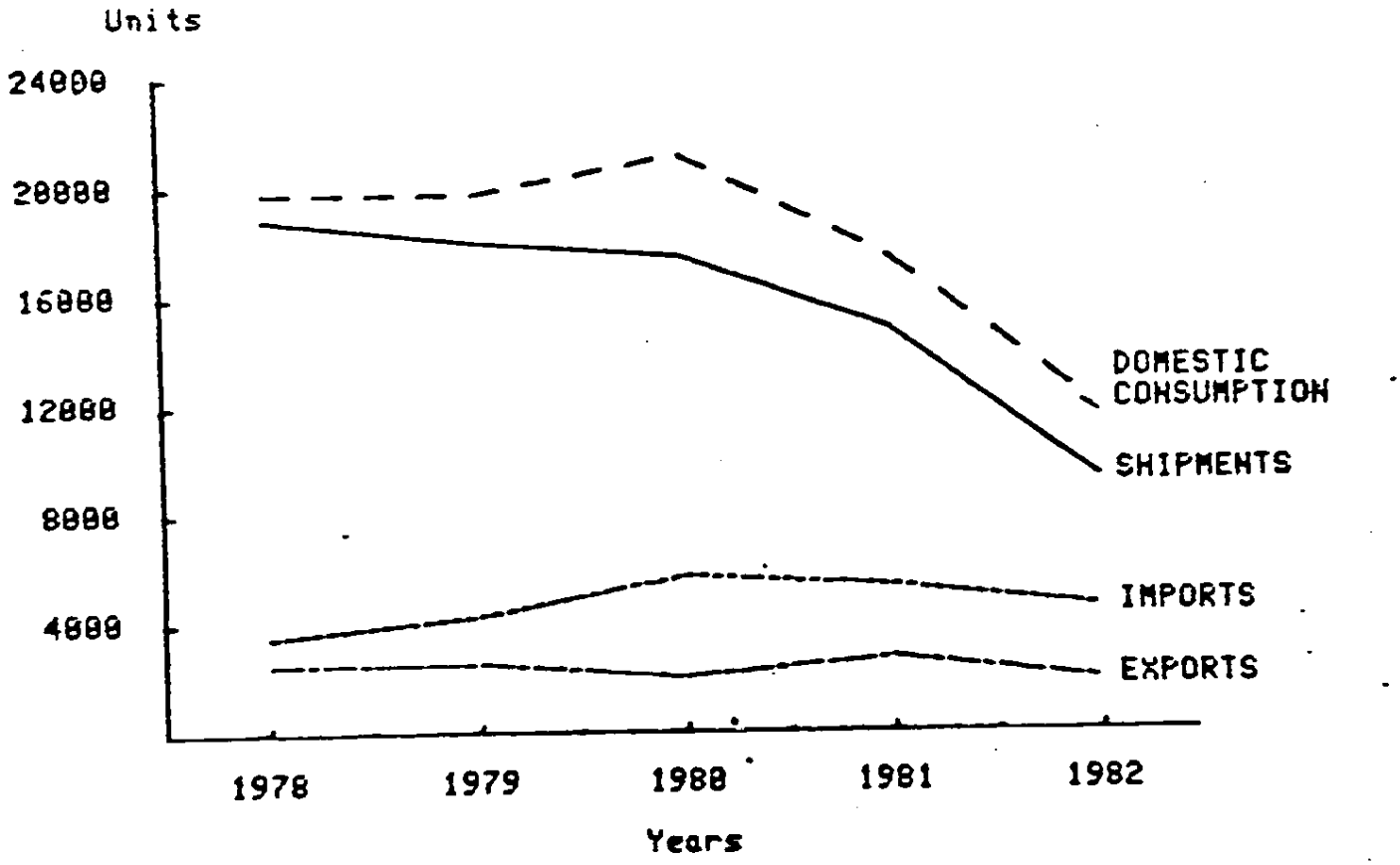
Fungibility: None.

Import Penetration: In 1978, imports accounted for 17.5% of domestic consumption. By 1982, imports accounted for 37.8% of domestic demand. However, it should be pointed out that this is due in large measure to declining domestic consumption with a relatively constant level of imports. In absolute terms, imports have declined from 5698 units in 1980 to 4530 units in 1982. Although domestic shipments have likewise declined, they still account for over seventy-five percent of U.S. consumption.

Mobilization Capacity: Increased 10% during 1978-82 period.

Conclusion: Negative finding. There has been a decline in the absolute number of foreign imports for the past three years and there is insufficient evidence to suggest that imports are a principal factor preventing the U.S. from meeting mobilization requirements.

GRINDING AND POLISHING MACHINE TOOLS



Source: U.S. Department of Commerce, Bureau of the Census.

Horizontal NC Turning Machines

	Mob Year	Year 1	Year 2	Year 3
Requirements	12,854	11,927	7,793	4,025
Domestic Capacity	4,251	5,037	6,462	8,451
Domestic Inventory	368			
Importers Inventory	1,162			
DIPEC	NA*			
Total	5,781			
Domestic/Shortfall/ Surplus	-7,073	-6,890	-1,331	+4,426

* The DIPEC inventory for vertical and horizontal NC turning lathes is 35; no further breakdown is available.

Domestic Shortfall: The U.S. would have a shortfall of NC turning machines during the mobilization and during the first two years of the conflict. By the third year, it is anticipated that increasing U.S. mobilization capacity will be able to meet declining demand.

Foreign Availability: These machines are available from most of the major free world suppliers and can be delivered to the U.S. in 6-9 months. However, the shortfalls are substantial, and Commere Department analysts believe that the U.S. will not be able to import sufficient quantities to meet requirements.

Fungibility: Non-NC machines may be substituted for all applications with reduced efficiency.

Import Penetration: Imports as a percentage of domestic consumption rose from 49% in 1980 to 70% in 1982. At the same time, U.S. shipments declined rapidly from 2524 units in 1980 to 1295 in 1982. Whereas in 1980 U.S. shipments accounted for 54% of domestic consumption, by 1982 they accounted for only 36%.

Mobilization Capacity: Increased 34% during 1978-82 period for overall NC turning category. However, no growth is expected through 1985.

Conclusion: Positive finding. There are substantial projected shortfalls that cannot be met by anticipated total supplies. There is a need for an expanding domestic production capability because the U.S. cannot be assured of obtaining requisite supplies from foreign manufacturers in a national security emergency. NC turning machines are particularly important to the national security due to their key role in flexible manufacturing systems (FMS). Such systems are essential to improvement in both the quality and efficiency of weapons systems production.

Although there has been some growth in capacity to produce NC turning machines during 1978-82, no growth is expected though 1985. Rising import penetration has impeded the expansion of the U.S.

industry that is required for national security purposes. It will not be possible to maintain current mobilization capacity, much less achieve the required growth, with imports capturing the majority of the market. Further, it should be noted that importers are presently holding a large stock of horizontal NC turning machines that are available for sale. This inventory will further exacerbate recovery problems for the U.S. industry.

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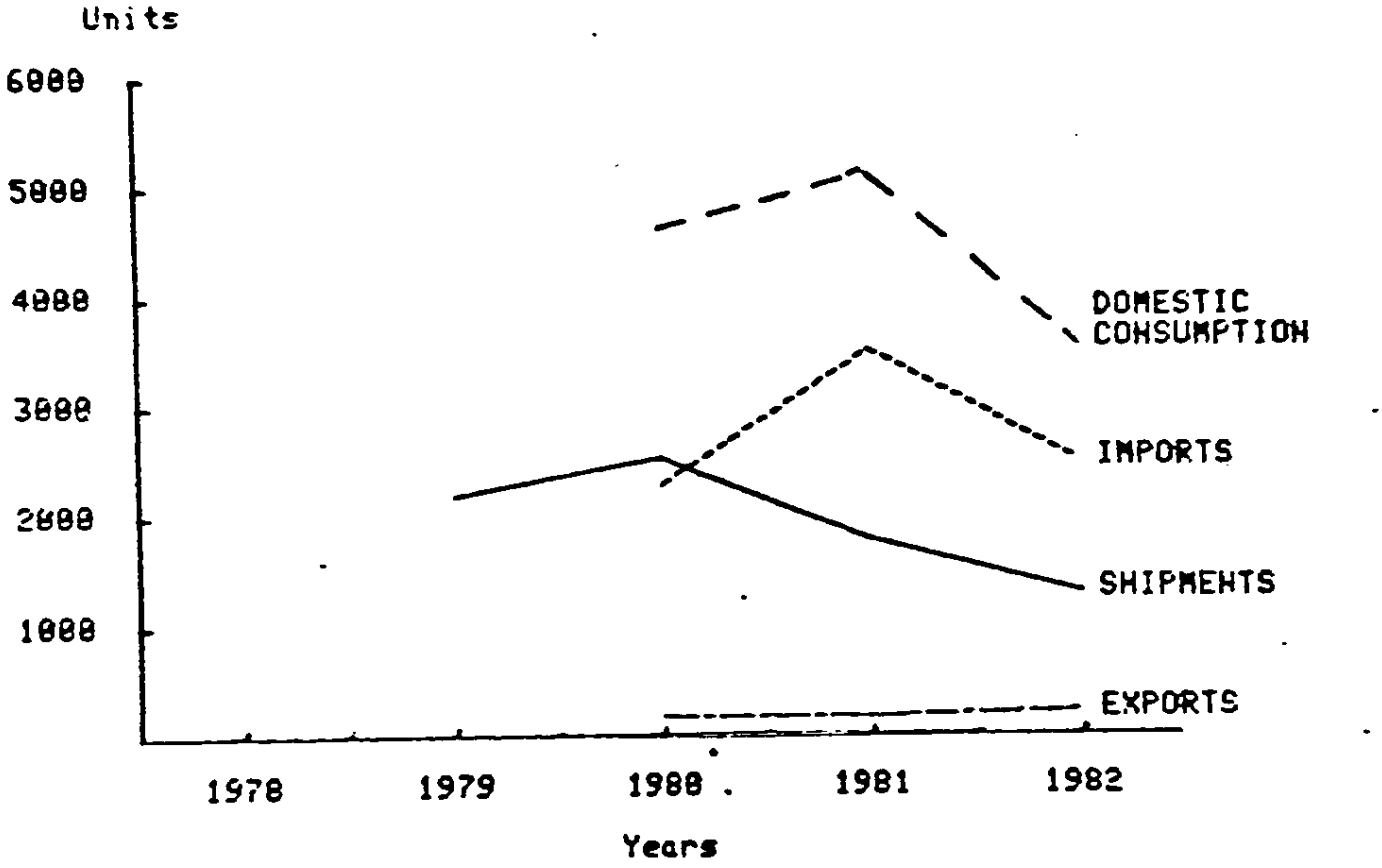
HORIZONTAL NC LATHES *



*Data on imports, exports and domestic consumption not available prior to 1980.
Source: U.S. Department of Commerce, Bureau of the Census.

Vertical NC Turning Machines

	Mob Year	Year 1	Year 2	Year 3
Requirements	1,717	1,996	1,442	861
Domestic Capacity	632	749	961	1,256
Domestic Inventory	55			
Importers Inventory	126			
DIPEC	NA*			
Total	813			
Domestic/Shortfall/ Surplus	- 904	-1,247	- 481	+ 395

* The DIPEC inventory for vertical and horizontal NC turning lathes is 35; no further breakdown is available.

Domestic Shortfall: The U.S. would have a shortfall of vertical NC turning machines for the mobilization and two years of the conflict.

Foreign Availability: These machines are manufactured in most of the major producing countries and can be delivered in 10-12 months under optimum conditions. However, the shortfalls are substantial and the U.S. will not be able to import sufficient quantities to meet requirements.

Fungibility: Horizontal boring or turning machines can be substituted for some applications but with reduced efficiency. Non-NC machines could also replace vertical NC machines for all applications but with reduced efficiency.

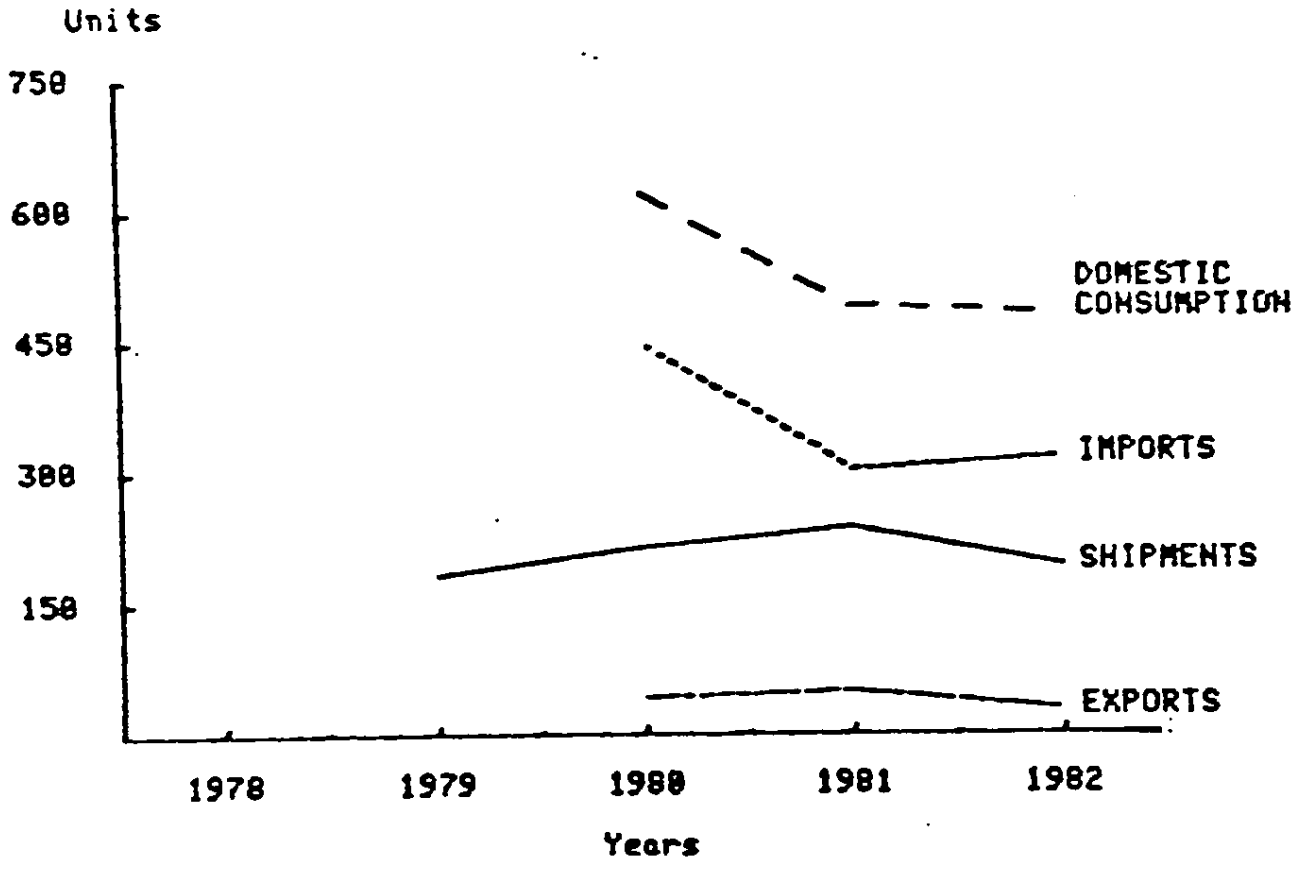
Import Penetration: Imports as a percentage of domestic consumption have been high since 1980 and were 66% in 1982. At the same time, domestic shipments have declined.

Mobilization Capacity: Capacity increased during the 1978-82 period for the overall NC turning category. No growth is anticipated for the 1983-85 period.

Conclusion: Positive finding. There are substantial projected supply shortfalls that cannot be met by total available supplies. In view of the above, the U.S. requries a growing capability to manufacture vertical NC machines. Import penetration is high, thereby impeding needed growth in the U.S. industry for national security purposes.

NC turning machines are particularly important to the national security due to their key role in flexible manufacturing systems (FMS), which are essential to improving both the quality and efficiency of weapons systems production.

VERTICAL NC LATHES *



*Data on imports, exports and domestic consumption not available prior to 1980.
Source: U.S. Department of Commerce, Bureau of the Census.

Non NC Turning Machines

	Mob Year	Year 1	Year 2	Year 3
Requirements	58,633	46,627	27,570	15,044
Domestic Capacity	36,390	43,122	55,313	72,343
Domestic Inventory	7,703			
Importers Inventory	5,671			
DIPEC	3,232			
Total	52,996			
Domestic/Shortfall/ Surplus	-5,637	-3,505	+27,743	+57,299

Domestic Shortfall: The U.S. would have a shortfall in the mobilization period and during the first year of the conflict. In the later war years, U.S. mobilization production capabilities are expected to meet and greatly exceed declining demand.

Foreign Availability: Non-NC turning machines are available from all the major producing countries and can be delivered to the U.S. in 6-9 months.

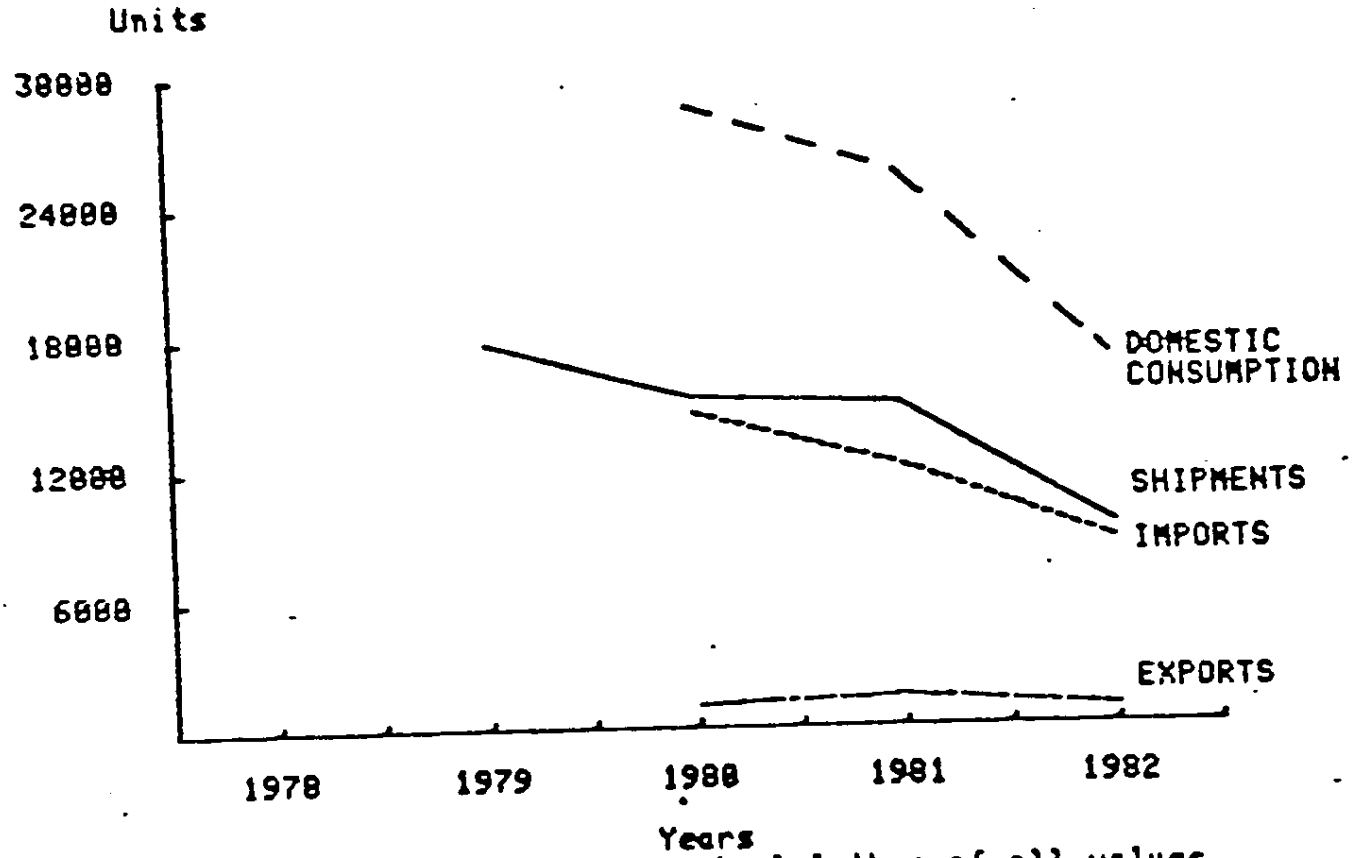
Fungibility: None.

Import Penetration: Imports as a percentage of domestic consumption were 49.2% for the 1980-82 period. In absolute terms, imports have declined from 14,439 machines in 1980 to 8546 machines in 1982. For the first six months of 1983, imports were 2448 machines compared with 5133 machines for the same period in 1982, a decline of about 50%.

Mobilization Capacity: Declined 3% during the 1978-82 period.

Conclusion: Negative finding. Domestic shortfalls are small, imports are widely available during the mobilization period, and imports to the U.S. have declined substantially in absolute terms since 1980.

NON NUMERICAL CONTROL LATHES *



*Shipments include non numerical control lathes of all values

Source: U.S. Department of Commerce, Bureau of the Census.

Milling Machines

	Mob Year	Year 1	Year 2	Year 3
Requirements	38,830	22,538	10,251	2,991
Domestic Capacity	23,291	27,600	35,402	46,303
Domestic Inventory	4,029			
Importers Inventory	1,777			
DIPEC	1,812			
Total	30,909			
Domestic/Shortfall/ Surplus	-7,921	+5,062	+25,151	+43,312

Domestic Shortfall: The U.S. would have a shortfall in the mobilization period. During the war years mobilization capacity is expected to meet and greatly exceed requirements.

Foreign Availability: Milling machines are manufactured by all of the major foreign suppliers and can be delivered in six months. The U.S. will be able to import large quantities of milling machines during the mobilization period from the entire free-world market. During the first year of the conflict, milling machines will be available from friendly and allied countries that are not in the war zone.

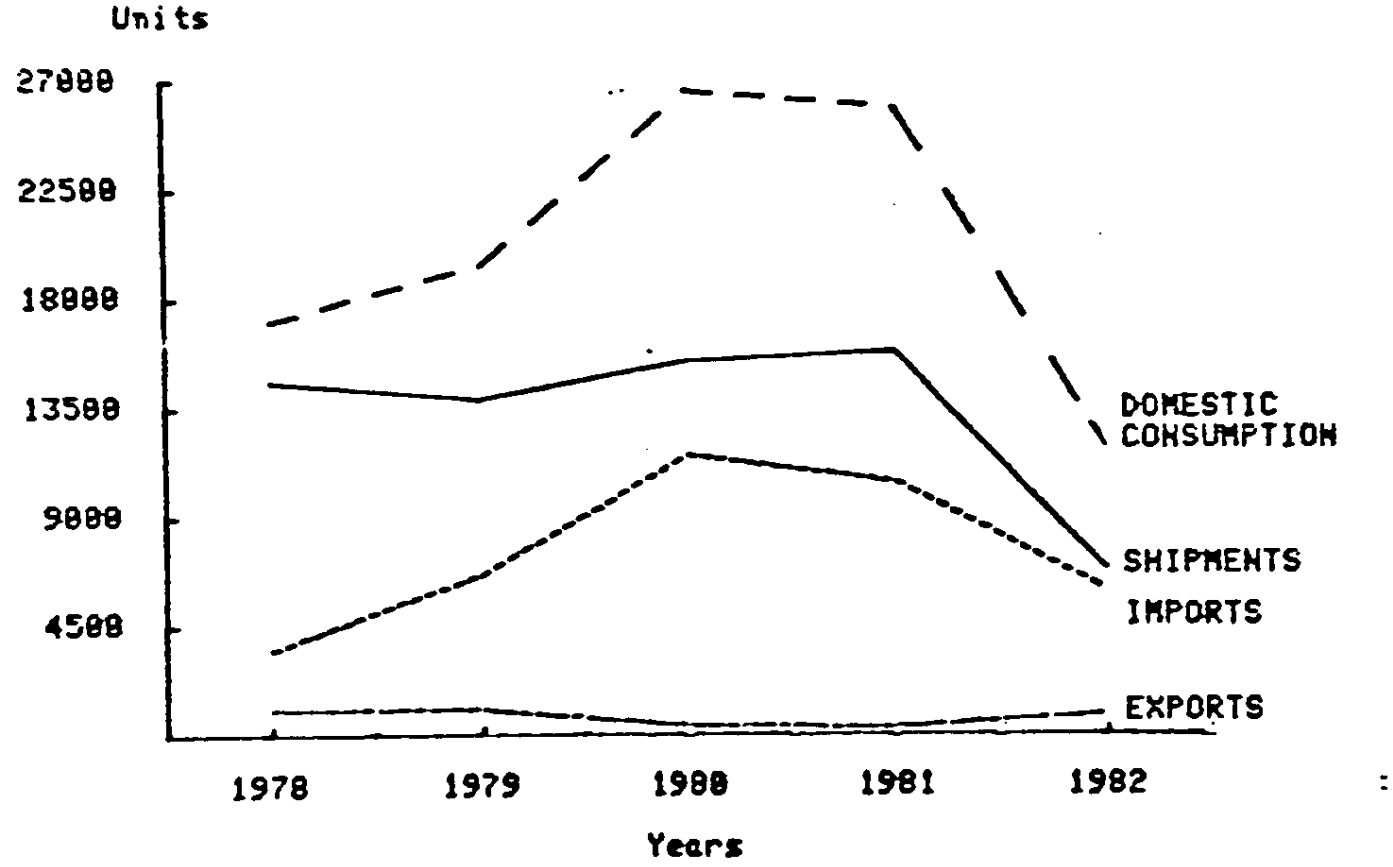
Fungibility: None.

Import Penetration: Imports as a percentage of domestic consumption have risen from 34.0% in 1979 to 49.7% in 1982. However, it should be noted that domestic consumption of milling machines has declined significantly since 1980 and, in absolute terms, imports have declined as well. Furthermore, during the first six months of 1983, imports were only about half the amount shipped for the past six months of 1982.

Mobilization Capacity: Increased during 1978-82 period.

Conclusion: Negative finding. The foreign availability of milling machines is high and imports have declined substantially in absolute terms since 1980.

MILLING MACHINE TOOLS *



*Shipments in 1978 include milling machines valued less than $2500 per unit.
Source: U.S. Department of Commerce, Bureau of the Census.

Machining Centers

	Mob Year	Year 1	Year 2	Year 3
Requirements	13,271	14,010	9,763	5,652
Domestic Capacity	3,618	4,287	5,499	7,193
Domestic Inventory	620			
Importers Inventory	575			
DIPEC	28			
Total	4,841			
Domestic/Shortfall/ Surplus	-8,430	-9,723	-4,264	+1,541

Domestic Shortfall: The U.S. would experience shortfalls in machining centers during the mobilization period and during the first two years of the war. By the third year of the conflict, it is expected that mobilization capacity could exceed declining requirements.

Foreign Availability: Machining centers are manufactured by most of the major foreign suppliers. Commerce Department industry analysts believe that they can be delivered to the U.S. in about nine months from Japan and West Germany. Other countries could supply the U.S. within a one year period. However, given the magnitude of the shortfall and the wartime conditions set forth in the scenario, the U.S. will not be able to obtain sufficient deliveries from foreign suppliers to fill the demand gap.

Fungibility: Although milling machines may be substituted for machining centers, for certain applications, substituting milling machines would reduce productivity.

Import Penetration: During the 1978-82 period, imports as a percentage of domestic consumption rose from 22% to 64%. The major increase in imports took place in 1981, when the U.S. purchased 2007 foreign machines compared with 957 machines in 1980, a rise of over 100%. During the first six months of 1983, imports as a percentage of domestic consumption rose to 78%, compared with 62% during the same period in 1982. Domestic shipments as a percentage of domestic consumption declined from 46% to 27% during the same period.

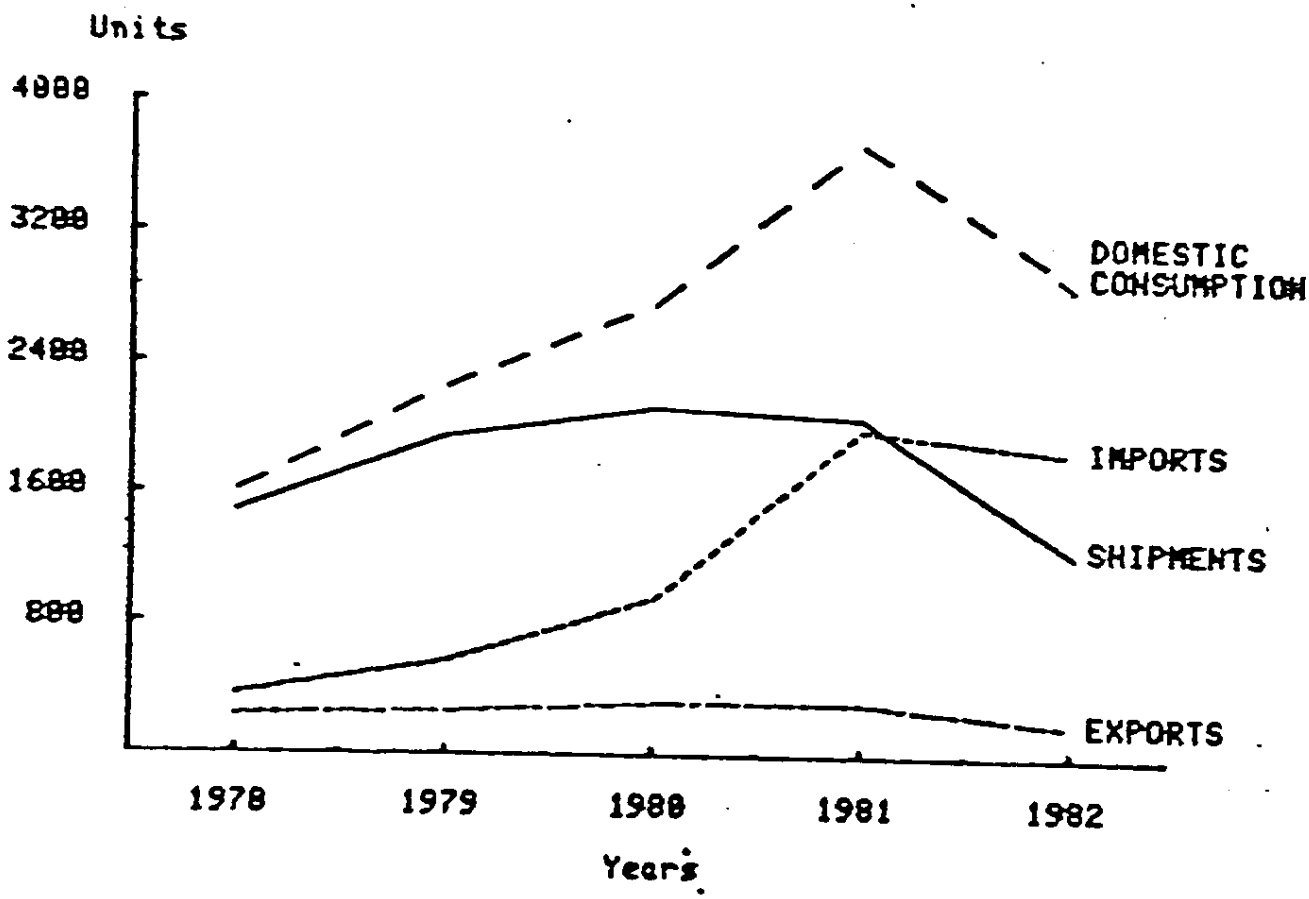
Mobilization Capacity: Mobilization capacity increased 15% during the 1978-82 period. A decline in capacity is anticipated for the 1983-85 period.

Conclusion: Positive finding. There are substantial projected machining center shortfalls that cannot be met by anticipated total supplies. There is a need for an expanding domestic production

capability because the U.S. cannot be assured of obtaining requisite supplies from foreign manufacturers in a national security emergency. Imports have been impeding the growth of the U.S. industry by rapidly increasing their market penetration, while U.S. shipments have declined each year since 1980. The U.S. requires a growing machining center production capability for national security purposes, and inventories being held by importers will tend to delay the recovery of the U.S. machining center industry when the market improves. The clear and present danger to national security would be further exacerbated by any additional loss of capacity resulting from import penetration.

Machining centers are particularly important to the national security due to their key role in flexible manufacturing systems (FMS), which are essential to improving both the quality and quantity of weapon systems production.

MACHINING CENTERS



Source: U.S. Department of Commerce, Bureau of the Census.

Station-Type Machines

	Mob Year	Year 1	Year 2	Year 3
Requirements	3,521	3,297	1,730	1,023
Domestic Capacity	1,942	2,301	2,952	3,861
Domestic Inventory	219			
Importers Inventory	0			
DIPEC	170			
Total	2,331			
Domestic/Shortfall/ Surplus	-1,190	- 996	+1,222	+2,838

Domestic Shortfall: The U.S. would have a shortfall in the mobilization year and during the first year of the conflict. However by the second and third years of the conflict, U.S. production capabilities would meet and greatly exceed requirements.

Foreign Availability: Station type machines take one year to deliver and are available from West Germany, Switzerland, France and Canada. Canada is considered a reliable supplier for the duration of the conflict. However, the magnitude of the shortfall is high and the U.S. could not import sufficient quantities to meet requirements in a timely manner.

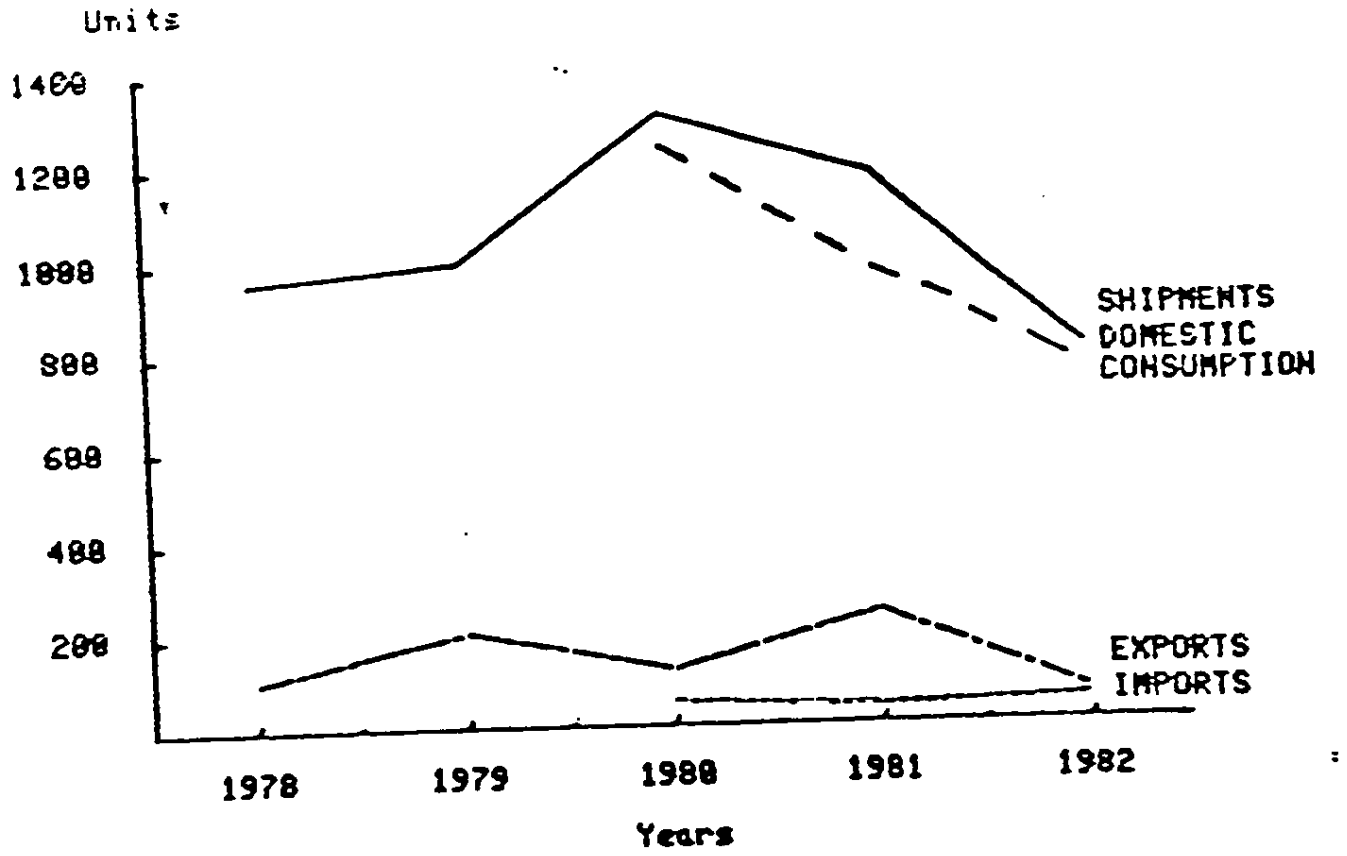
Fungibility: Very difficult to assess because station type machines are an automated form of other combinations of machine tool applications. Although there is some substitutability, this could only be accomplished with reduced efficiency.

Import Penetration: During the last three years, imports have been 4-6% of domestic consumption. In view of this fact, any shortfall cannot be attributed to import penetration.

Mobilization Capacity: Increased during 1978-82 period.

Conclusion: Negative finding. Import penetration is low.

STATION TYPE MACHINE TOOLS *



*Data on imports and domestic consumption not available prior to 1980.

Source: U.S. Department of Commerce, Bureau of the Census.

Punching & Shearing Machines

Due to a paucity of economic and trade data, the overall assessment of NC and non-NC punching and shearing machines has been aggregated. Disaggregated assessments are made whenever possible.

Numerically Controlled

	Mob Year	Year 1	Year 2	Year 3
-Requirements	1,559	1,153	514	195
Domestic Capacity	2,029	2,404	3,084	4,034
Domestic Inventory	63			
Importers Inventory	115			
DIPEC	4			
Total	2,211			
Domestic/Shortfall/ Surplus	+ 652	+1,251	+2,570	+3,899

Non Numerically Controlled

	Mob Year	Year 1	Year 2	Year 3
Requirements	18,326	14,165	7,154	3,078
Domestic Capacity	5,508	6,527	8,372	10,950
Domestic Inventory	396			
Importers Inventory	865			
DIPEC	103			
Total	6,872			
Domestic/Shortfall/ Surplus	-11,454	- 7,638	+ 1,218	+ 7,872

Domestic Shortfall: There would be a surplus of NC punching and shearing machines during the mobilization and all three years of the conflict. These could be used to help compensate for the shortfall of non-NC machines.

Foreign Availability: Non-NC machines are available from almost all of the major suppliers and can be delivered to the U.S. in 4-5 months. NC machines are available only from Japan, West Germany, the United Kingdom, Canada, France, and Switzerland and can be delivered in 6-9 months.

Fungibility: NC machines can be used in place of non-NC machines with greatly improved efficiency.

Import Penetration: Imports of all punching and shearing machines as a percentage of domestic consumption increased from 19% in 1978 to 36% in 1982.

Mobilization Capacity: Increased over 100% for NC machines during the 1978-82 period. Capacity declined less than 10% during the same period for non-NC machines.

Conclusion: Negative finding. Imports can conpensate for shortfalls. Furthermore, it cannot be demonstrated that imports are the principal cause of any shortfall that may arise.

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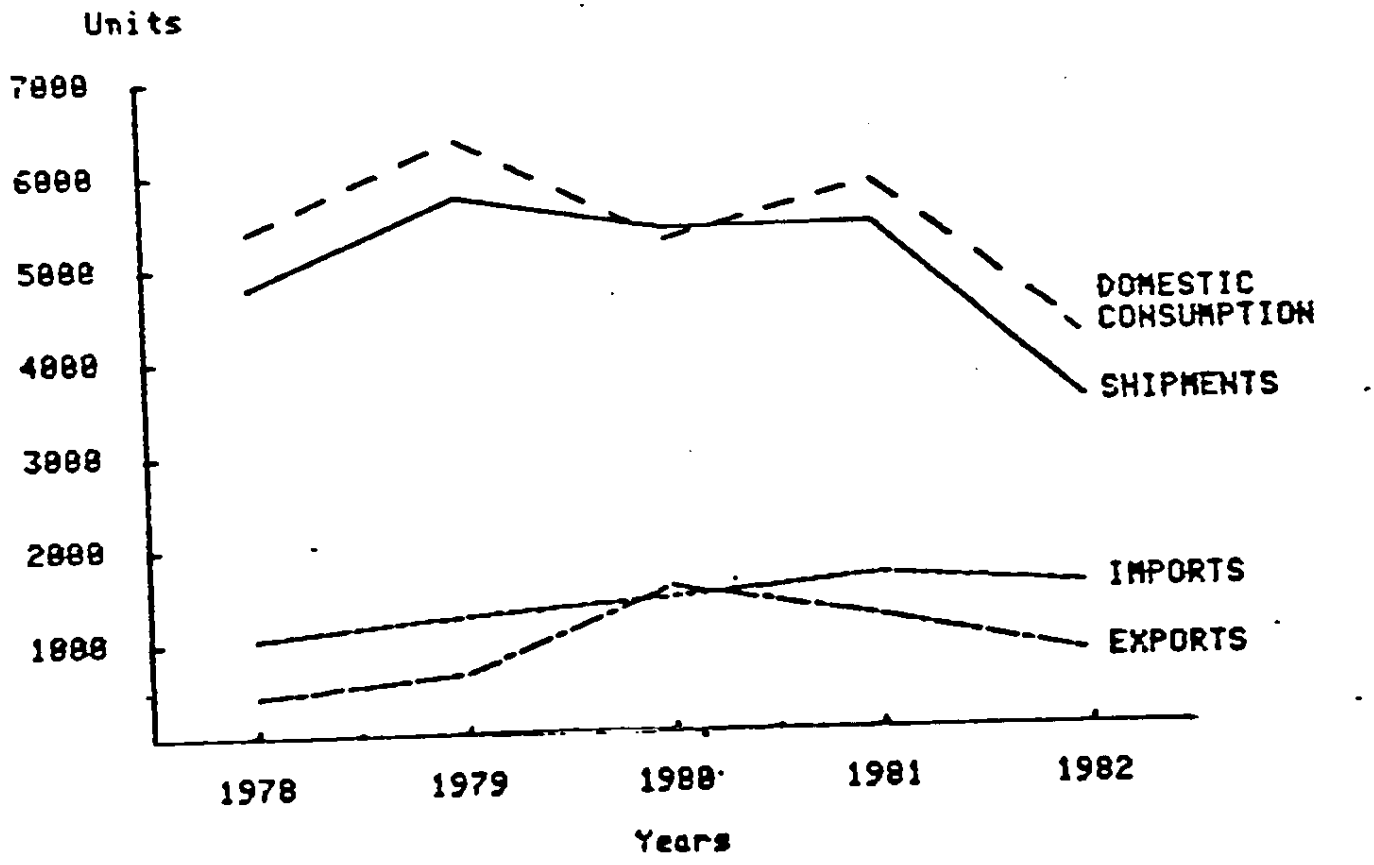
PUNCHING & SHEARING MACHINE TOOLS



Source: U.S. Department of Commerce, Bureau of the Census.

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Bending and Forming

Due to a paucity of economic and trade data, the overall assessment of bending and forming machines has been aggregated. Disaggregated assessments are made whenever possible.

Non-Numerically Controlled

	Mob Year	Year 1	Year 2	Year 3
Requirements	18,707	15,262	8,643	4,004
Domestic Capacity	8,825	10,458	13,414	17,544
Domestic Inventory	1,427			
Importers Inventory	1,889			
DIPEC	252			
Total	12,393			
Domestic/Shortfall/ Surplus	-6,314	-4,804	+4,771	+13,540

Numerically Controlled

	Mob Year	Year 1	Year 2	Year 3
Requirements	855	749	434	248
Domestic Capacity	704	834	1,070	1,400
Domestic Inventory	8			
Importers Inventory	56			
DIPEC	0			
Total	768			
Domestic/Shortfall/ Surplus	- 87	+ 85	+ 636	+ 1,152

Domestic shortfall/surplus: There would be a small shortage of NC bending and forming machines during the mobilization period and a small surplus during each year of the war. On the other hand, there would be a shortfall of non-NC machines during the mobilization and during the first year of the conflict. In the later phase of the war, U.S. mobilization capacity is expected to be able to meet and exceed demand.

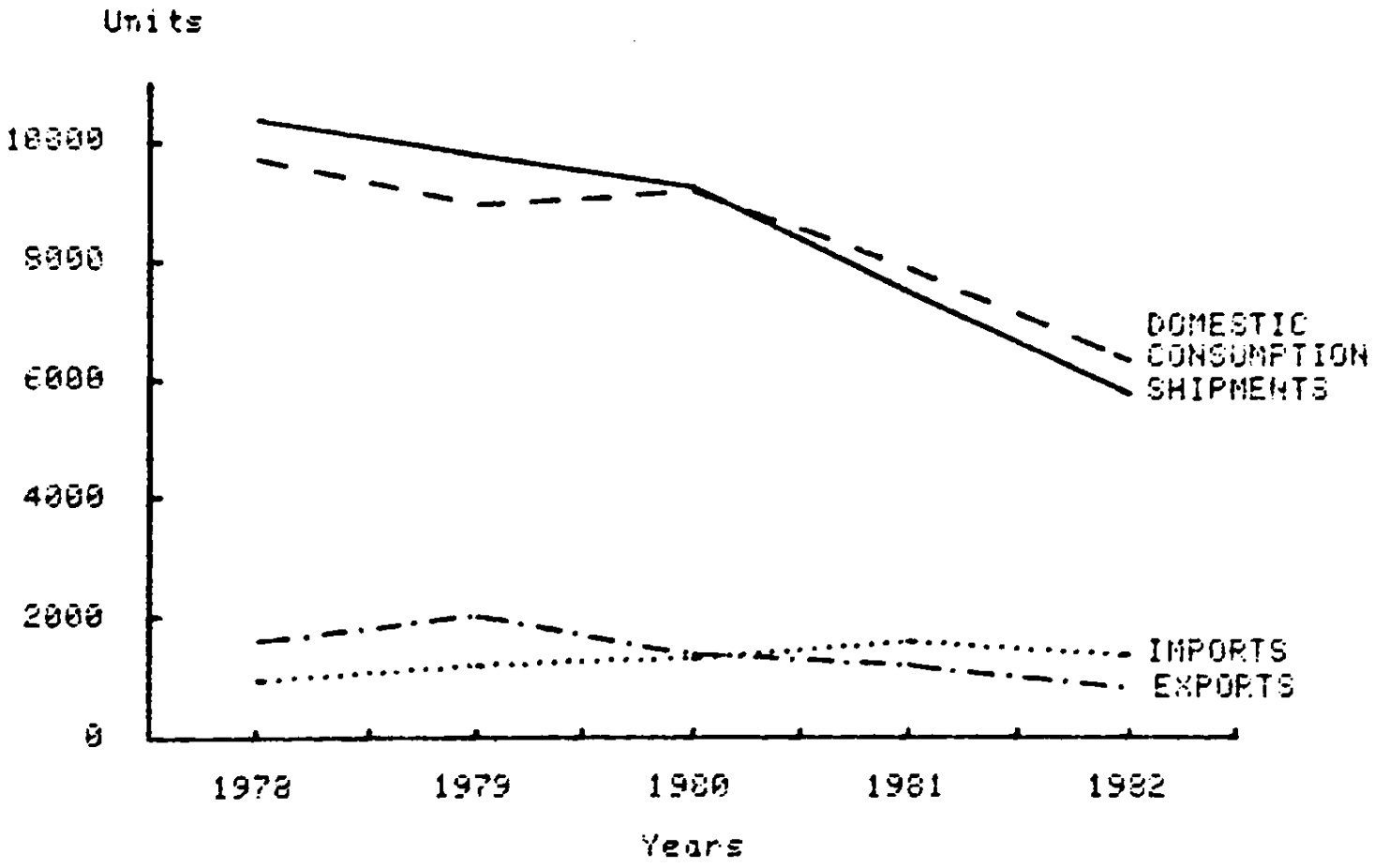
Foreign availability: NC and non-NC machines are available from almost all of the major producers. Non-NC machines can be delivered in 4-5 months and NC machines can be delivered in about six months. It is therefore anticipated that the U.S. would be able to obtain substantial quantities of both types of machines prior to the outbreak of hostilities.

Fungibility: NC machines can be substituted for non-NC machines with greater efficiency.

Import penetration: Import penetration as a percentage of domestic consumption for all bending and forming machines increased from 10% in 1978 to 22% in 1982. For the first six months of 1983, imports accounted for 23% of domestic consumption compared with 22% for the first six months of 1982.

Mobilization Capacity: Increased almost three-fold for NC machines. Capacity to manufacture non-NC machines also increased, but at only 15% during the 1978-82 period.

Conclusion: Negative finding.



Source: U.S. Department of Commerce, Bureau of the Census.

Presses

	Mob Year	Year 1	Year 2	Year 3
Requirements	22,128	18,546	7,734	4,139
Domestic Capacity	15,143	17,950	23,025	30,114
Domestic Inventory	1,272			
Importers Inventory	152			
DIPEC	1,268			
Total	17,835			
Domestic/Shortfall/ Surplus	-4,293	- 596	+15,291	+25,975

Domestic Shortfall: The U.S. would have a shortfall during the mobilization period and during the first year of conflict. During the latter two years of conflict, mobilization production capabilities would be more than adequate to meet demand.

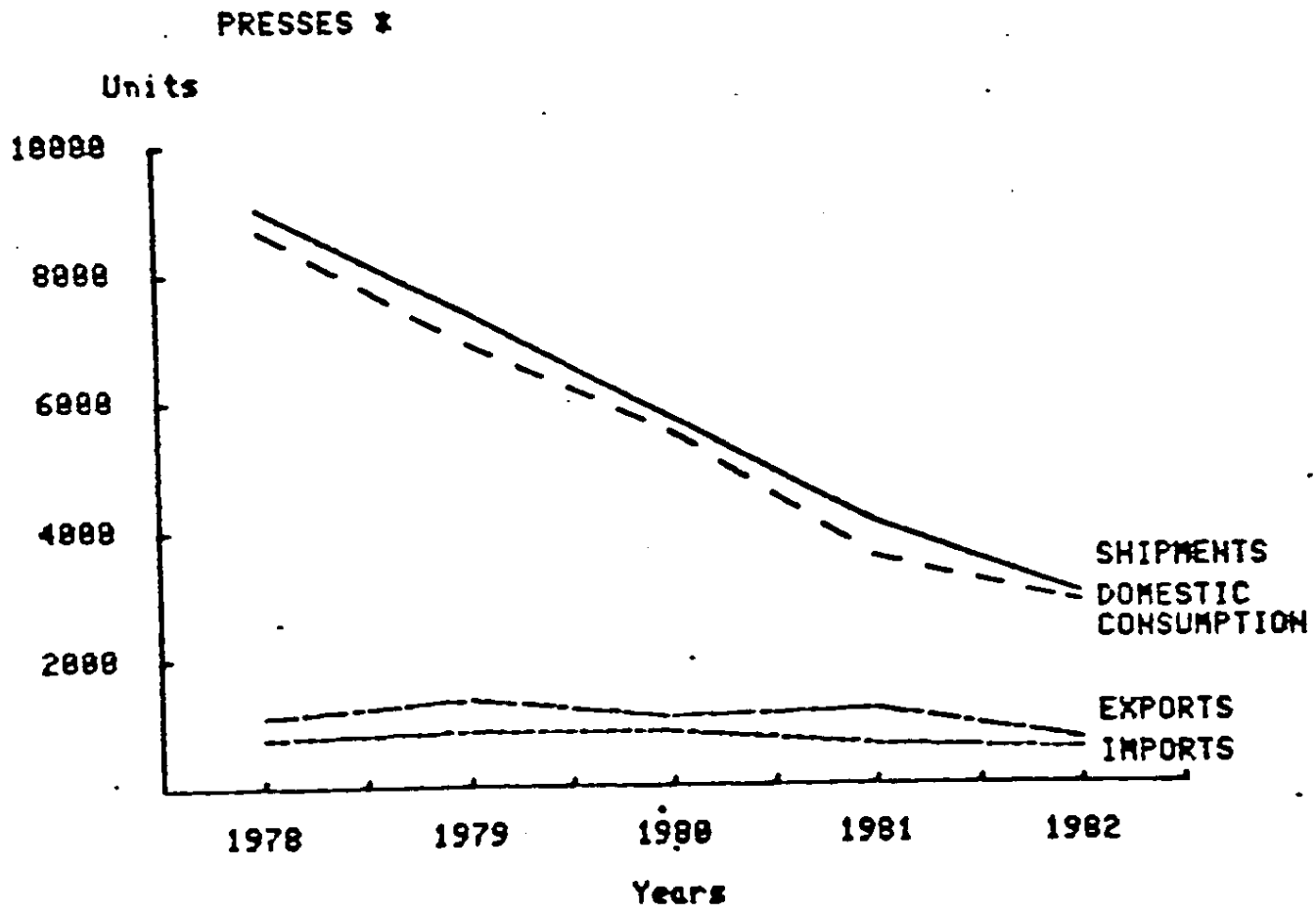
Foreign Availability: Presses require longer lead times for delivery than most other machine tools. However, they are manufactured in numerous countries, including those nations which could supply the U.S. for the duration of the conflict (e.g., Canada, Spain).

Fungibility: None.

Import Penetration: In 1979, imported presses accounted for 12% of domestic consumption. By 1982, imports accounted for 19% of domestic demand.

Mobilization Capacity: Increased significantly during 1978-82 period.

Conclusion: Negative finding. Any shortfall that may arise cannot be directly attributed to import penetration.



*Shipments in 1978 include presses valued $1000-2500 per unit.

Source: U.S. Department of Commerce, Bureau of the Census.

Forging

	Mob Year	Year 1	Year 2	Year 3
Requirements	1,507	1,781	1,141	693
Domestic Capacity	863	1,023	1,312	1,716
Domestic Inventory	65			
Importers Inventory	0			
DIPEC	92			
Total	1,020			
Domestic/Shortfall/ Surplus	- 487	- 758	+ 171	+1,023

Domestic Shortfall: The U.S. would have a shortfall of forging machines during the mobilization period and during the first year of the conflict. For the second and third years of the conflict, it is expected that U.S. mobilization production capacity would be able to meet declining demand.

Foreign Availability: Forging machines are manufactured by most of the major foreign producing countries and take one year to deliver. Given the lead time for delivery of foreign forging machines, Commerce Department industry analysts do not believe that the anticipated shortfalls can be met by imports.

Fungibility: None.

Import Penetration: Imports as a percentage of domestic consumption have increased from 35% in 1978 to 52% in 1982. During the first six months of 1983, import penetration increased to 70% compared with 50% for the same period in 1982. Domestic shipments declined by 50% during this period.

Mobilization Capacity: Declined by about half during the 1978-82 period. No growth is projected for the 1983-85 period.

Conclusion: Positive finding. There are projected shortfalls that cannot be met by total available supplies. Imports have substantially increased their share of the market, while domestic shipments have rapidly declined. In light of these developments, there has been a major decline in U.S. forging machine mobilization capacity. Had the U.S. not lost this capacity during the 1978-82 period, it would be able to meet mobilization requirements. In order to alleviate the national security threat, it is necessary to prevent further erosion of U.S. mobilization capacity, and hopefully to recapture lost capacity.

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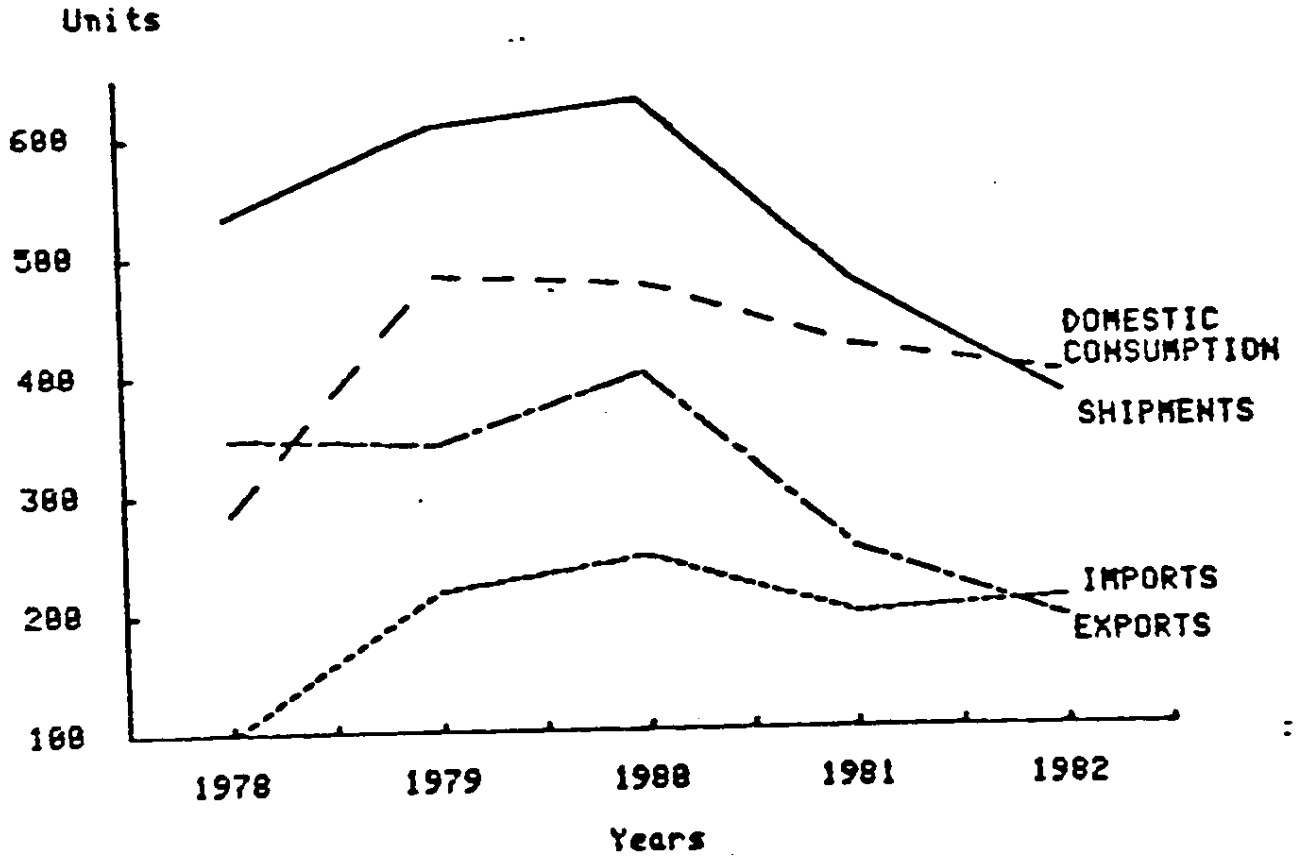
FORGING MACHINE TOOLS



Source: U.S. Department of Commerce, Bureau of the Census.

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NOTES TO CHAPTER VII

1. For the purposes of this investigation, we assumed current mobilization production capacity for the mobilization year. Capacity expansions for the three war years are based upon responses to the DOC industry survey.

VIII. REMEDIES: Options and Recommendations

The President has the statutory authority to take whatever trade action is necessary to guarantee the national security. Rather than survey the entire range of options, we outline below the key possibilities and recommend one approach. In developing a recommendation the following criteria were used:

The selected remedy should

- o Help maintain domestic production capacity to the extent that domestic production together with imports and Defense Industrial Plant and Equipment inventories would be sufficient to meet national security needs;
- o Incorporate, to the maximum extent possible, U.S. trade policy goals, keeping in mind the priority of maintaining a national security industrial base;
- o Minimize the direct and indirect costs of taking actions necessary to meet national security needs;
- o Be feasible.

A. Options

1. Impose either an absolute or market share quota -- based on value or volume -- on certain imported machine tools.

   Pro: Quotas provide the domestic industry with a minimum market share and therefore protection of existing production capacity, and possibly the will to expand capacity.

   Con: Quotas, particularly absolute limits, are difficult to set and maintain in a highly cyclical market.

   Quotas could induce producers--both foreign and domestic--to raise prices.

   U.S. trading partners may allege that we are in violation of the GATT, even though the GATT principle of compensation is, in theory, not applicable when actions are taken for national security reasons.

Discussion:

If a trade option were selected, domestic producers would best be protected by imposing quotas on imports that give them a guaranteed share of the U.S. market. Quotas can be set at a level to assure a greater utilization of domestic mobilization capacity and thus prevent future erosion of capacity and future increases in projected mobilization shortfalls.

Unlike a tariff, quotas would afford absolute protection because it

would not be possible for foreign producers to expand their exports beyond the levels desired by the importing country through adjustment of their prices. Unlike a tariff system, whereby the government of the importing country collects part of the increased costs paid by domestic consumers in the form of customs duties, windfall gains would accrue to the private sector unless the government of the importing country auctioned the quota rights. If it did not do so, a windfall gain, consisting of the differential, adjusted for freight, between foreign and domestic prices, times the quantity imported would probably be captuared by whoever was given the quota rights. If foreign producers were given the quota rights, the windfall gain would most likely accrue to them.

Costs of quotas to the consumer would be limited by competitive factors in the domestic machine tool market. There are numerous domestic producers in the various machine tool categories experiencing extremely low rates of capacity utilization. Imports that do come in under quota would maintain significant cost advantages accruing from lower production costs, favorable exchange rates and favorable financing packages. U.S. machine tool demand is widely expected to continue its recovery at moderate rates over the next several years, thereby maintaining competition in the market and limiting the scope for price increases. Ideally, quotas could be set at levels that maximize competition among domestic producers, maintain competitive pressure from imports and provide effective relief to the domestic industry.

2. Impose or increase tariffs on certain categories of machine tools.

   Pro: Imposition of a tariff would reduce demand for imports to the extent it raises the real price to the consumer of the imported machine tool.

   Con: Domestic consumers would face potentially higher prices.

   Measuring the potential trade impact would be difficult because foreign suppliers have the option to reduce prices to counter the tariff.

   Because the real price to the consumer includes other factors such as quality, delivery times, and financing, it is not clear what level tariff would trim imports enough to enhance domestic production.

3. Remove certain categories of Machine Tools from Duty-free Treatment Under the Generalized System of Preferences (GSP).

   Pro: Will provide limited assistance to domestic producers, similar to a tariff increase.

   Would involve much lower costs than other trade options considered.

Con: Would slightly raise quoted prices to consumers of machine tools.

Action would represent a minor departure from U.S. foreign policy to assist developing countries.

Impact would focus on lower value products, offering virtually no protection to producers of more advanced products.

Discussion:

GSP sales of new machines valued over $2500 represented 6% of the value of imports under the three TSUS categories and accounted for less than 2% of domestic consumption in 1982. An adjustment in GSP would not be effective in maintaining U.S. machine tool production capabilities.

B. Recommendations

Having found that in the case of five of the machine tool categories investigated, the national security is threatened by imports of these products, various remedies to redress this problem were analyzed in the previous section. The primary consideration for policy intervention under Section 232 is to insure the domestic availability of certain products for national defense purposes at the lowest possible costs and by methods consistent with overall U.S. trade objectives.

For four categories of machine tools -- machining centers, horizontal and vertical turning centers, and boring machines -- the option of a market-share quota would best accomplish the goals of at least maintaining a national security production base without imposing undue costs on the economy. Because of the cyclical nature of this industry a market share quota would be easier and more efficient to set and maintain. Quota levels should approximate the lowest import market share in 1980-1981, a time when the industry was financially healthy. To allocate the quotas among U.S. trading partners, a negotiated agreement with our trading partners would be the most advantageous solution, but, in its absence, allocations could be based on historical patterns.

Quotas should be set based on units of machine tools rather than value. Although the petitioner suggests value would be the appropriate measure, for national security purposes units are more important because the issue is to have sufficient tools--regardless of their value--to meet mobilization needs. Because of this, all the findings in this investigation are based on units, not dollar value.

Table VIII-1

1984
Projected Supply

		Without Quotas	With Quotas	Change
Boring[1]	Domestic	112	880	+768
	Imports	1488	720	
	Total	1600	1600	
Horizontal NC Turning	Domestic	962	1512	+550
	Imports	1788	1238	
	Total	2750	2750	
Vertical NC Turning	Domestic	136	175	+39
	Imports	214	175	
	Total	350	350	
Machining Centers	Domestic	627	2138	+1511
	Imports	2223	712	
	Total	2850	2850	

1/ Includes all boring machines because of statistical problems in estimating production for only machines above $2500.

	Recommended Quota Level	Current Import Market Share
Machining Center -	25%	74%
Horizontal NC Lathes -	45%	60%
Vertical NC Lathes -	50%	55%
Boring Machines [1]	35%	50%

1/ excludes machines less than $2500 in value.

Using the Commerce projections for supply and demand for the five categories, Table VIII-1 summarizes the impact of the recommended quota in 1984 had it been imposed on January 1. Given current inventories and excess domestic capacity, we judge that the industry could accommodate this increase in demand without significant disruption or delays. We estimate that, based on 1982 prices, their quotas would bolster U.S. shipments by 20-25% for the four types of machines. Quotas on boring machines, however, should be adjusted to exclude those machines only available through imports. Switzerland, for example, is our sole source of large jib boring machines.

In its petition, the Association claims that with protection, the industry is prepared to expand current production and at least maintain capacity. We recommend that the quotas be set for three years with the option to extend at least for another two years if the industry has responded--that is, if production has increased and capacity has been maintained and perhaps expanded. We recommend that Commerce make such an assessment at the beginning of the third year. This assessment should also focus on the level and scope of the quotas to determine whether national security objectives are being met.

A trade remedy for forging machines would not necessarily bolster production or maintain capacity. U.S. demand is falling over the long term. Most of the lost production

apparently reflects lost export markets. The U.S. has only one producer of free-forming forging presses (hammers) and no other U.S. company appears interested in getting involved in this relatively unsophisticated process. In view of the above, we recommend that DOD stockpile forging machines to insure adequate supplies.

In addition, we recommend that other initiatives be taken to maintain the mobilization production capacity for machine tools. First, a Machine Tool Advisory Committee--consisting of industry, financial, and government representatives--should be established with subcommittees to work with Justice (anti-trust policy), Defense (stockpiling), Commerce (industry analysis, export controls), and the Export-Import Bank (export financing). Second, DOD should reevaluate and redesign the defense equipment reserve to establish where current stocks meet U.S. needs and whether revolving purchases might be feasible. In particular, DOD should examine the feasibility of stockpiling forging equipment. Finally, we recommend that the Trade Policy Committee review the impact of removing GSP coverage for all machine tools, but specifically low-value boring machines.

APPENDIX

A: COPY OF THE STATUTE AND REGULATIONS

B: SUMMARY OF THE PETITION

C: FEDERAL REGISTER NOTICE ACCEPTING THE PETITION

D: SUMMARY OF THE MOBILIZATION SCENARIO

E: SURVEY TABLES

F: DOE ENERGY AVAILABILITY ASSESSMENT BASED ON SCENARIO

G: MACHINE TOOL CONSUMPTION, SHIPMENTS, IMPORTS AND EXPORTS, 1978-82

H: TARIFF SCHEDULE OF THE U.S.--1983